

## AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A substantially pure nucleic acid encoding a lineage-37 (LIN-37) polypeptide that is free of the genes which, in the naturally-occurring genome of the organism, flank the gene, said polypeptide having at least ~~85%~~ 95% amino acid sequence identity to SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

2. (Cancelled)

3. (Cancelled)

4. (Original) The nucleic acid of claim 1, wherein said nucleic acid is cDNA.

5. (Original) The nucleic acid of claim 1, wherein said nucleic acid is *C.elegans* DNA.

6. (Original) The nucleic acid of claim 1, wherein said nucleic acid is human DNA.

7. (Previously Presented) A substantially pure DNA encoding the amino acid sequence of SEQ ID NO: 1 that is free of the genes which, in the naturally-occurring genome of the organism, flank the gene, wherein said DNA encodes a polypeptide that is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

8-9. (Cancelled)

10. (Currently Amended) A substantially pure synMuv nucleic acid comprising

nucleic acid having at least ~~85%~~ 95% nucleotide sequence identity to the DNA sequence of SEQ ID NO:2, wherein said nucleic acid encodes a polypeptide that is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

11. (Original) The nucleic acid of claim 1, wherein said DNA is operably linked to regulatory sequences for expression of said polypeptide and wherein said regulatory sequences comprise a promoter.

12. (Original) The nucleic acid of claim 11, wherein said promoter is a constitutive promoter.

13. (Original) The nucleic acid of claim 11, wherein said promoter is inducible by one or more external agents.

14. (Original) The nucleic acid of claim 11, wherein said promoter is cell-type specific.

15. (Original) A vector comprising the nucleic acid of claim 1, said vector being capable of directing expression of the peptide encoded by said DNA in a vector-containing cell.

16. (Currently Amended) [[A]] An isolated cell which contains a substantially pure nucleic acid encoding a lineage-37 (LIN-37) polypeptide that is free of the genes which, in the naturally-occurring genome of the organism, flank the gene, said polypeptide having at least ~~85%~~ 95% amino acid sequence identity to SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

17. (Cancelled)

18. (Currently Amended) [[A]] An isolated transgenic cell which contains a substantially pure nucleic acid encoding a lineage-37 (LIN-37) polypeptide having at least ~~85%~~ 95% amino acid sequence identity to SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

19-24. (Cancelled)

25. (Currently Amended) A substantially pure lineage-37 (*lin-37*) nucleic acid having at least ~~85%~~ 95% or greater nucleotide sequence identity to SEQ ID NO: 2 isolated according to the method comprising:

- (a) providing a cell sample;
- (b) introducing by transformation into said cell sample a candidate *lin-37* nucleic acid;
- (c) expressing said candidate *lin-37* nucleic acid within said cell sample; and
- (d) determining whether said cell sample exhibits a decrease in a cell proliferation response, whereby a decrease in cell proliferation identifies a *lin-37* nucleic acid.

26-33. (Cancelled)

34. (Currently Amended) A substantially pure, naturally-occurring nucleic acid encoding a lineage-37 (LIN-37) polypeptide that is free of the genes which, in the naturally-occurring genome of the organism, flank the gene, said polypeptide having at least ~~85%~~ 95% amino acid sequence identity to the amino acid sequence of SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell

proliferation.

35. (Cancelled)

36. (Currently Amended) The nucleic acid of claim 1, wherein said nucleic acid encodes a LIN-37 polypeptide that has ~~95%~~ 99% or greater amino acid sequence identity to the amino acid sequence of SEQ ID NO:1.

37. (Cancelled)

38. (Previously Presented) The nucleic acid of claim 1, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell proliferation by 50%.

39. (Currently Amended) The nucleic acid of claim ~~[[1]]~~ 38, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell proliferation by one-fold.

40. (Currently Amended) A substantially pure, naturally-occurring synMuv nucleic acid comprising nucleic acid having at least ~~85%~~ 95% or greater nucleotide sequence identity to the nucleotide sequence of SEQ ID NO: 2, wherein said nucleic acid encodes a polypeptide that is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

41. (Cancelled)

42. (Currently Amended) The synMuv nucleic acid of claim 10, wherein said synMuv nucleic acid comprises a nucleic acid sequence that has ~~95%~~ 99% or greater

nucleotide sequence identity to the nucleotide sequence of SEQ ID NO:2.

43. (Cancelled)

44. (Previously Presented) The synMuv nucleic acid of claim 10, wherein said synMuv nucleic acid encodes a polypeptide that has the ability to decrease cell proliferation by 50%.

45. (Currently Amended) The synMuv nucleic acid of claim ~~10~~ 44, wherein said synMuv nucleic acid encodes a polypeptide that has the ability to decrease cell proliferation by one-fold.

46. (Currently Amended) ~~[[A]]~~ An isolated cell which contains a substantially pure naturally occurring nucleic acid encoding a lineage-37 (LIN-37) polypeptide that is free of the genes which, in the naturally-occurring genome of the organism, flank the gene, said polypeptide having at least ~~85%~~ 95% or greater amino acid sequence identity to SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

47. (Cancelled)

48. (Currently Amended) The isolated cell of claim 16, wherein said nucleic acid encodes a LIN-37 polypeptide that has ~~95%~~ 99% or greater amino acid sequence identity to the amino acid sequence of SEQ ID NO:1.

49. (Cancelled)

50. (Currently Amended) The isolated cell of claim 16, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell proliferation by 50%.

51. (Currently Amended) The isolated cell of claim ~~46~~ 50, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell proliferation by one-fold.

52. (Currently Amended) ~~[[A]]~~ An isolated transgenic cell which contains a substantially pure naturally-occurring nucleic acid encoding a lineage-37 (LIN-37) polypeptide having at least 95% or greater amino acid sequence identity to SEQ ID NO: 1, wherein said polypeptide is hydrophilic, acts non-cell autonomously, and inhibits cell proliferation.

53. (Cancelled)

54. (Currently Amended) The isolated transgenic cell of claim 18, wherein said nucleic acid encodes a LIN-37 polypeptide that has ~~95%~~ 99% or greater amino acid sequence identity to the amino acid sequence of SEQ ID NO:1.

55. (Cancelled)

56. (Currently Amended) The isolated transgenic cell of claim 18, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell proliferation by 50%.

57. (Currently Amended) The isolated transgenic cell of claim ~~48~~ 56, wherein said nucleic acid encodes a LIN-37 polypeptide that has the ability to decrease cell

proliferation by one-fold.

58. (Currently Amended) A substantially pure, naturally-occurring *lineage-37* (*lin-37*) nucleic acid having at least ~~85%~~ 95% or greater nucleotide sequence identity to SEQ ID NO: 2 isolated according to the method comprising:

- (a) providing a cell sample;
- (b) introducing by transformation into said cell sample a candidate *lin-37* nucleic acid;
- (c) expressing said candidate *lin-37* nucleic acid within said cell sample; and
- (d) determining whether said cell sample exhibits a decrease in a cell proliferation response, whereby a decreased level of cell proliferation identifies a *lin-37* nucleic acid.

59. (Cancelled)

60. (Previously Presented) The *lin-37* nucleic acid of claim 25, wherein said *lin-37* nucleic acid has 95% or greater nucleotide sequence identity to the nucleotide sequence of SEQ ID NO: 2.

61. (Currently Amended) A substantially pure, naturally-occurring *lineage-37* (*lin-37*) nucleic acid having about ~~85%~~ 95% or greater nucleotide sequence identity to SEQ ID NO: 2 isolated according to the method comprising:

- (a) providing a cell sample;
- (b) introducing by transformation into said cell sample a candidate *lin-37* nucleic acid;
- (c) expressing said candidate *lin-37* nucleic acid within said cell sample; and
- (d) determining whether said cell sample exhibits a decreased cell proliferation response, whereby a decreased level of cell proliferation identifies a *lin-37* nucleic acid.

62. (Cancelled)

63. (Previously Presented) The *lin-37* nucleic acid of claim ~~62~~ 61, wherein said *lin-37* nucleic acid has the ability to decrease cell proliferation by 50%.

64. (Previously Presented) The *lin-37* nucleic acid of claim ~~62~~ 63, wherein said *lin-37* nucleic acid has the ability to decrease cell proliferation by one fold.